

REMARKS

Claims 2, 3, 5-7, 10 and 11 are pending. Claims 10 and 11 have been newly added. No new matter is presented.

The features claimed in newly added claims 10 and 11 have support in the specification at pages 26-29 and in Figs. 7 and 8.

Claims 2 and 7 were rejected under 35 USC 103(a) as being unpatentable over the admitted prior art in view of Hu. This rejection is respectfully traversed.

Claim 2 recites "wherein trenches are individually provided between the channel-forming semiconductor regions of the P-type and N-type MOS transistors, **said trenches being deeper than the shallow P-type wells, but shallower than the deep N-type well.**" Hu fails to teach or suggest this feature.

The Examiner relies on the embodiment shown in Fig. 7 of Hu as showing most of the features of the claims. With respect to the embodiment shown in Fig. 7, Hu discloses that "[T]rench isolation with two different trench depths are used for device isolation: isolating trenches deeper than the deep n-wells are used to isolate the p-channel transistors; isolating trenches deeper than the shallow p-well but shallower than the deep n-wells are used to isolate the n-channel transistors" (col. 5, lines 31-36). Therefore, Hu does not teach that the trenches provided between the channel-forming semiconductor regions of the p-type and n-type MOS transistors are deeper than the shallow P-type wells, but shallower than the deep N-type well, because Hu clearly teaches using trenches which are deeper than the deep n-type well for the p-channel transistors. This is contrary to the device that is claimed. Therefore, even if the references were combined, the features of claim 2 would not be taught by the combination.

Further, the Examiner has still failed to meet his burden of providing adequate evidence of motivation to combine the prior art disclosed in the application with the teachings of Hu. The mere fact that Hu may be an improvement over the prior art, is not sufficient evidence, by itself, of a motivation to combine. In fact, many patents are an improvement over the prior art, thereby justifying being allowed as patents in the first place, but this is not sufficient evidence of motivation to combine the teachings of the prior art. The Examiner is requested to specifically point out where Hu provides motivation to modify the prior art disclosed in this application beyond merely broadly stating that Hu improves the function, thereby providing motivation to modify the prior art disclosed in the application.

Claim 7 is allowable at least due to its dependency from claim 2. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

Claim 3 was rejected under 35 USC 103(a) as being unpatentable over the admitted prior art in view of Hu and further in view of Tsui. This rejection is respectfully traversed.

Claim 3 depends from claim 2. Since Hu fails to teach or suggest "said trenches being deeper than the shallow P-type wells, but shallower than the deep N-type well," and Tsui also fails to teach or suggest this feature, this rejection should be withdrawn.

Claims 5, 6 and 9 were rejected under 35 USC 103(a) as being unpatentable over the admitted prior art and Hu and further in view of Hodges. This rejection is respectfully traversed.

Claims 5 and 6 depend, either directly or indirectly, from claim 2. As discussed above, Hu fails to teach or suggest "said trenches being deeper than the shallow P-type wells, but shallower than the deep N-type well." Hodges also fails to teach or suggest this feature and is not relied upon as such. Therefore, the features of claims 5 and 6 are neither taught nor suggested by the cited prior art, either alone or in combination.

Claim 9 recites "first MOS transistors for performing internal processing" and "second MOS transistors for performing direct signal transmission and reception to and from an external device." Applicant previously submitted that none of the prior art references, either alone or in combination, teach or suggest a first MOS transistor which performs internal processing and a second MOS transistor which performs direct signal transmission to and from an external device.

In response to Applicant's remarks, the Examiner asserted that "since the claims are drawn to a device the function carries no weight." Applicant respectfully disagrees. Where the functional recitation in a structure claim inextricably defines the structure itself, the claims clearly distinguish over the prior art. For example, claim 9 recites a semiconductor device comprising first MOS transistors for performing internal processing and second MOS transistors for performing direct signal transmission and reception to and from an external device." The functional recitations that follow "first MOS transistors" and "second MOS transistors" clearly defines the structure of the semiconductor device. Hence, these limitations must be met by the applied prior art. See, for example, *Wright Medical Tech. v. Osteonics Corp.*, 122 F.3d 1440, 43 USPQ2d 1837 (Fed. Cir. 1997), analyzing functional limitations as a claim limitation. If the functional language operates as a claim limitation, it must be afforded patentable weight. This is certainly the case with claim 9, and the functional limitations of claim 9 should be considered to be claim limitations which limit the structure of the semiconductor device. Further, it is improper to state that since the claim is directed to a device, the function carries no weight. The Examiner has no legal basis for making this assertion and it is contrary to case law, as discussed above.

Further, as asserted above, the Examiner has not provided adequate evidence of motivation to combine the cited references. Merely stating that the secondary reference shows

an improvement, is not sufficient. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

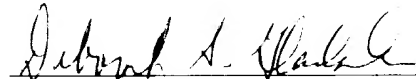
Newly added claims 10 and 11 are allowable at least due to their respective dependency from claim 9.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 204552016500.

Respectfully submitted,

Dated: July 3, 2003

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